

ABSTRACT OF THE DISCLOSURE

A semiconductor device comprises a semiconductor substrate, and a capacitor provided above the semiconductor substrate, the capacitor comprises a lower  
5 electrode containing metal, a first dielectric film provided above the lower electrode and containing tantalum oxide or niobium oxide, a top surface of the first dielectric film including a projecting portion, an upper electrode provided above the projecting  
10 portion of the first dielectric film and containing metal, a second dielectric film provided between the lower electrode and the first dielectric film and having a lower permittivity than the first dielectric film, and a third dielectric film provided between the  
15 projecting portion of the first dielectric film and the upper electrode and having a lower permittivity than the first dielectric film.